

REMARKS

Upon entry of this amendment, claims 15 - 28 are all the claims pending in the application. Claims 1 - 14 have been canceled by a previous amendment and claims 26 and 27 have been canceled by this amendment. Claims 15, 16 and 28 have been amended. No new matter has been added. In view of the above amendments and the following remarks, reconsideration and further examination are requested.

Support for the amendments to claims 15 and 28 can be found for example, in Figure 1 and on pages 17 - 19 of the originally filed specification and claims 26 and 27, which have been canceled. Claim 16 has been amended to correct a minor grammatical informality as suggested by the Examiner.

Applicants note that a replacement sheet is being submitted herewith for Figures 13, 14A, 14B, 15A, 15B, and 16. In the replacement sheets, the label --PRIOR ART-- has been added. No new matter has been added.

Objection to the Drawings

The Examiner has objected to the drawings for the reasons set forth on page 2 of the Office Action. In particular, the Examiner asserts that Figures 13 - 16 should be designated by a legend such as --PRIOR ART-- because only that which is old is illustrated. Applicants are submitting herewith a replacement sheet for Figures 13, 14A, 14B, 15A, 15B and 16 which are now labeled --PRIOR ART--. Accordingly, Applicants kindly request that the objection be reconsidered and withdrawn.

Objection to the Claims

Claim 16 has been objected to for the reasons set forth on page 2 of the Office Action. In particular, the Examiner asserts that on line 4, "a adhesive" should be changed with --an adhesive--. Applicants have amended claim 16 as suggested by the Examiner. Accordingly, Applicants respectfully request that the objection to the claim be reconsidered and withdrawn.

Claim Rejections under 35 U.S.C. § 102

Claim 15 has been rejected under 35 U.S.C. § 102(b) as being anticipated by JP 07-130024 to Toyoda et al. Applicants respectfully traverse this rejection on the following basis.

In the present case, each and every element of the rejected claims is not either expressly or inherently described in the Toyoda et al. reference for the following reasons.

Independent claim 15, as amended, recites a combination of elements, *inter alia*:

"an optical stand;

a holder that holds the objective lens to be movable in a focus direction and in a tracking direction;

a base fixed to the optical stand and supporting the holder; and

an arch-shaped linking member provided to the base, wherein

a light exiting-surface of the light flux separation element from which the second light flux comes out is laminated to a light incident-surface of the light-receiving element on which the second light flux is incident, and

the light-receiving element is disposed so as to be set inside the base together with the light flux separation element through the arch-shaped linking member.” [*Emphasis added*]

According to amended independent claim 15, the light-receiving element is laminated on the light flux separation element. Accordingly, the light-receiving element and the light flux separation element can be disposed inside the base through the arch-shaped linking member. With this arrangement, a projection area of the optical head can be smaller which contributes to a reduction of the disc recording and playback device in size.

Toyoda et al. disclose a magneto-optical detector. The Examiner alleges that Toyoda et al. implicitly disclose an objective lens in Figure 3 [*sic*], element 8 and Figure 5, element L2. In addition, the Examiner alleges that the light-receiving element (Figs. 1 and 2, element PDM) is laminated on the light flux separation element (Fig. 1, elements 31-37 and 39). However, Applicants respectfully submit that Toyoda et al. fails to teach or suggest an optical stand, a holder, a base, and an arch-shaped linking member, wherein the light-receiving element is disposed so as to be set inside the base together with the light flux separation element through the arch-shaped linking member as now recited in independent claim 15 of the present invention.

Accordingly, Applicants respectfully submit that Toyoda et al. fails to teach or suggest each and every element of amended independent claim 15. Therefore, Applicants request that the rejection of claim 15 under 35 USC 102(b) be withdrawn.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 15, 16 and 21 - 28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants’ Admitted Prior Art (AAPA) in view of JP 02-166623 to Kamisada. Claims 17 - 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable

over Applicants' Admitted Prior Art (AAPA) in view of Kamisada and US Patent Pub. No. 2003/0053404 to Kondo. Claims 21 and 22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art (AAPA) in view of Kamisada and US Patent No. 6,580,674 to Nishiyama et al. Applicants respectfully traverse these rejections on the following basis.

In the present case, in the combination of references fails to teach or suggest all of the features of the claims for the following reasons.

Amended independent claim 15 has been discussed above. Independent claim 28 has been similarly amended.

AAPA discloses an optical head comprising a light-receiving element 36 which is disposed away from a composite element 8. Therefore, it is a possible that the light-receiving element 36 is misaligned with respect to the composite element 8, which poses a problem that accuracy of detection using the light-receiving element 36 cannot be ensured. AAPA also discloses an objective lens moving mechanism 14, a holder 12, and a base 15.

Further, the optical head shown in Figure 13 of Applicants' application is provided with a member, *assuming arguendo*, which is similar to the arch-shaped linking member 15b in base 15 of Figure 1 of the instant invention. However, in the optical head, the light-receiving element 36 is so soldered on the flexible circuit 35 so as to protrude from the edge of the flexible circuit 35 in Figures 13, 14A and 14B (AAPA). Further, a size of the member similar to the arch-shaped linking member 15b of the present invention is smaller than the width of the composite element 8 having a beam splitter 8a. Thus, it is not possible to dispose the light-receiving element 36 together with the composite element 8 in AAPA in such a manner as to be set inside the base 19

through the member similar to the arch-shaped linking member 15b of the instant invention as recited in amended independent claims 15 and 28.

Further, the Examiner cited Kamisada as allegedly teaching that a light-exiting surface of a light flux separation element which is laminated to a light incident surface of a light-receiving element in attempt to cure the deficiencies of AAPA.

Kamisada teaches an optical head. The Examiner alleges that optical device 10 is a light flux separation element, photodetecting element 12 is a light-receiving element and adhesive 13 provides lamination for these two elements.

In the instant invention, by interposing the adhesive layer between the light exiting-surface and the light incident-surface, it is possible to adjust a quantity of light incident on the light-receiving element, and a quantity and aberration of light that is reflected on the light-receiving element and go incident on the photo-detector as stray light. It is thus possible to reduce detection errors caused by stray light while maintaining a quantity of light incident on the light-receiving element.

In addition, the specification of the instant application describes a reflection mirror 10 which is fixed onto an optical stand 19. Also, an integrated unit 9 is inserted inside the optical stand 19 after terminals 5 are soldered to a flexible circuit 35. The optical stand 19 and a resin package 6 are bonded and fixed to each other. As is shown in FIG. 1, an objective lens 11 is driven by an objective lens moving mechanism 14 in the focus direction and in the radial direction of a magneto-optical recording medium 13. A base 15 is bonded and fixed to the optical stand 19 using an adhesive 34. The objective lens 11 is held movably on an objective lens holder 12. The objective lens holder 12 is supported on the base 15. The base 15 is shaped like a frame, and is provided with a pair of pinching members 15a and 15a, and an arch-shaped

linking member 15b that links both pinching members 15a and 15a. The lens holder 12 is disposed so as to be surrounded by the both pinching members 15a and 15a and the linking member 15b.

In contrast with the present invention, the combination of AAPA and Kamisada fails to teach or suggest a light-receiving element, a base, and an arch-shaped linking member, wherein the light-receiving element is disposed so as to be set inside the base together with the light flux separation element through the arch-shaped linking member as now recited in independent claims 15 and 28. Therefore, Kamisada fails to cure the deficiencies of AAPA.

Furthermore, the Examiner cited Kondo as allegedly teaching the light transmittance of the adhesive layer in attempt to cure the deficiencies of AAPA and Kamisada.

Even *assuming arguendo* that Kondo teaches an adhesive transparent layer 11b having a light transmittance of 70% as discussed in paragraph [0120], the Kondo reference fails to cure the deficiencies of AAPA and Kamisada regarding a base provided with an arch-shaped linking member as recited in independent claims 15 and 28.

In addition, the Examiner cited Nishiyama et al. as allegedly teaching the transmission wave aberration of the adhesive layer in attempt to cure the deficiencies of AAPA and Kamisada.

Even *assuming arguendo* that Nishiyama et al. teach finishing an adhesive smoothly so that the transmission wavefront aberration of the retarder is $0.02 \lambda_{\text{rms}}$ or less (λ is a wavelength and rms is a root-mean-square value) as discussed in column 8, lines 11 -27, the Nishiyama et al. reference fails to cure the deficiencies of AAPA and Kamisada regarding a base provided with an arch-shaped linking member as recited in independent claims 15 and 28.

Thus, for these reasons, a person having ordinary skill in the art clearly would not have found it obvious to modify AAPA, or to make any combination of the references of record, in

such a manner as to result in or otherwise render obvious the present invention of claims 15 and 28.

As the features of claims 26 and 27 (which are now canceled) have been incorporated into claims 15 and 28, the rejection is deemed moot. Claims 16 and 21 - 25 depends from claim 15. Accordingly, Applicants submit that these claims are patentable at least by virtue of their dependency.

Accordingly, Applicants respectfully submit that the combination of references fails to teach or suggest each and every element of the claims. Therefore, Applicants request that the rejection of claims 15 - 25 and 28 under 35 USC 103(a) be withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Hideki NAKATA et al.

/W. Douglas Hahm/

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By: -04'00'

W. Douglas Hahm

Registration No. 44,142

for

Teresa M. Arroyo

Registration No. 50,015

Attorney for Applicant

TMA(JRF)/
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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